

## **NPL Search Results**

8/5/2 (Item 2 from file: 8)  
DIALOG(R)File 8: Ei Compendex(R)  
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### **Matched field processing with data-derived modes**

Hursky, P.; Hodgkiss, W.S.; Kuperman, W.A.  
**Corresp. Author/ Affil:** Hursky, P.: Sci. Appl. International Corp., 888 Prospect Street, Suite 201, San Diego, CA 92037, United States  
**Corresp. Author email:** paul.hursky@saic.com  
Journal of the Acoustical Society of America ( J. Acoust. Soc. Am. ) ( United States ) 2001 109/4 (1355-1366)  
**Publication Date:** 20011201  
**Publisher:** Acoustical Society of America  
**Item Identifier (DOI):** [10.1121/1.1353592](https://doi.org/10.1121/1.1353592)  
**Document Type:** Article; Journal **Record Type:** Abstract  
**Language:** English **Summary Language:** English  
**Number of References:** 26

The authors demonstrate MFP using data-derived modes and the sound speed profile, using no a priori bottom information. Mode shapes can be estimated directly from vertical line array data, without a priori knowledge of the environment and without using numerical wave field models. However, it is difficult to make much headway with data-derived modes alone, without wave numbers, since only a few modes at a few frequencies maybe captured, and only at depths sampled by the array. Using a measured **sound speed** profile, the **authors** derive self-consistent, complete **sets** of modes, wave numbers, and bottom parameters from data-derived modes. Bottom parameters enable modes to be calculated at all frequencies, not just those at which modes were derived from data. This process is demonstrated on SWellEx-96 experiment data. Modes, wave numbers, and bottom parameters are derived from one track and MFP based on this information is demonstrated on another track. (c) 2001 Acoustical Society of America.

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8/5/4 (Item 4 from file: 8)  
DIALOG(R)File 8: Ei Compendex(R)  
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### **Nonlinear fuzzy rule-based approach for estimating video traffic rate**

Grant, P.M.; Saw, Yoo-Sok; Hannah, J.M.  
**Corresp. Author/ Affil:** Grant, P.M.: Univ of Edinburgh, Edinburgh, United Kingdom  
Electronics Letters ( Electron Lett ) 1998 34/15 (1461-1462)  
**Publication Date:** 19980101  
**Publisher:** IEE  
**Item Identifier (DOI):** [10.1049/el:19981084](https://doi.org/10.1049/el:19981084)  
**Document Type:** Article; Journal **Record Type:** Abstract  
**Language:** English **Summary Language:** English  
**Number of References:** 11

The **authors** investigate a fuzzy logic-based **video rate control** technique which aims to **regulate** compressed video to a constant transmission rate, without incurring objectionable quality degradation. Conventional fuzzy rule-based control (FRC) does not adequately control the output video quality. Video information is therefore added into the FRC design by incorporating feed-forward scaling factors, derived from scene change features. The performance of this coder has been compared with other approaches measuring buffer occupancy, the number of coded bits per frame and peak signal-to-noise ratio.

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8/5/5 (Item 5 from file: 8)  
DIALOG(R)File 8: Ei Compendex(R)

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**Radial basis function video rate estimator for constant bit rate MPEG coders**

Saw, Yoo-Sok; Grant, P.M.; Hannah, J.M.; Mulgrew, B.

**Corresp. Author/ Affil:** Saw, Yoo-Sok: Univ of Edinburgh, Edinburgh, United Kingdom  
Electronics Letters ( Electron Lett ) 1996 32/21 (1969-1971)

**Publication Date:** 19961201

**Publisher:** IEE

**Item Identifier (DOI):** [10.1049/el:19961302](https://doi.org/10.1049/el:19961302)

**Document Type:** Article; Journal **Record Type:** Abstract

**Language:** English **Summary Language:** English

**Number of References:** 4

The **authors** apply a radial basis function (RBF) network to constant bit **rate control** for an **MPEG2** video encoder. The non-stationary property of the video data has been exploited effectively by using the RBF network as a rate estimator in a feedforward rate control algorithm. The performance of this scheme is evaluated in comparison with Test Model 5 (TM5), by measuring video rate and picture quality.

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8/5/7 (Item 7 from file: 8)

DIALOG(R)File 8: Ei Compendex(R)

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**On source timing recovery for circuit emulation in ATM networks**

Vakil, F.

**Corresp. Author/ Affil:** Vakil, F.: Bellcore, Morristown, NJ, USA

**Editor(s):** Anon

**Conference Title:** IEEE Global Telecommunications Conference & Exhibition (GLOBECOM '89). Part 1 (of 3)

**Conference Location:** Dallas, TX, USA **Conference Date:** 19891127-19891130

**Sponsor:** IEEE Communications Soc, New York, NY, USA; IEEE Dallas Section, Dallas, TX, USA

**E.I. Conference No.:** 13447 IEEE Global Telecommunications Conference and Exhibition ( IEEE Global Telecommun Conf Exhib ) 1989 3/- (1820-1827)

**Publication Date:** 19891201

**Publisher:** Publ by IEEE

**Document Type:** Conference Paper; Conference Proceeding **Record Type:** Abstract

**Language:** English **Summary Language:** English

**Number of References:** 14

Circuit emulation in ATM (asynchronous transfer mode) networks is considered. In a circuit-emulation session the source node generates a periodic cell stream. As this stream passes through the ATM network, it is distorted by cell delay jitter and loss, and a corrupted aperiodic copy of the source stream arrives at the receiver (destination). Considering a special case of the problem (fixed rate and small delay jitter), a simple scheme is devised that can reconstruct the continuous bit stream from the received cell **stream**. Allowing for variable **rate** sources (e.g., **fixed** quality, variable **rate video**), the **author** generalizes the problem and models the received cell stream as a point process whose intensity is a bandlimited function. Based on this model, the author devises an easily implementable mechanism that reconstructs a continuous bit stream from the received cell stream at the receiver (destination). Furthermore, some strategies for improving the performance of the proposed schemes are described. These strategies include assigning a higher priority for circuit-emulation cells, providing cell header error control, and possibly using positioned cells for emulated circuits inside the network.

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8/5/14 (Item 1 from file: 2)

DIALOG(R)File 2: INSPEC

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**Control of perceptual image quality based on PID for streaming video**

**Author(s):** Song Jian-xin<sup>1</sup>

**Affiliation(s):**

<sup>1</sup> Inf. Eng. Dept., Nanjing Univ. of Posts & Telecommun., China

**Journal:** Journal of China Universities of Posts and Telecommunications, vol.10, no.4, pp.82-9

**Publisher:** Editorial Department, J. China Univ. of Posts & Telecommunications

**Country of Publication:** China

**Publication Date:** Dec. 2003

**Language:** English

**Document Type:** Journal Paper (JP)

Constant levels of perceptual quality of streaming video is what ideally users expect. In most cases, however, they receive time-varying levels of quality of video. In this paper, the **author** proposes a new **control** method of perceptual quality in variable bit **rate video** encoding for streaming video. The image quality calculation based on the perception of human visual systems is presented. Quantization properties of DCT coefficients are analyzed to control effectively. Quantization scale factors are ascertained based on the visual mask effect. A proportional integral difference (PID) controller is used to control the image quality. Experimental results show that this method improves the perceptual quality uniformity of encoded video. ( 15 refs.)

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8/5/17 (Item 4 from file: 2)

DIALOG(R)File 2: INSPEC

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**Transcoding of MPEG-2 video bitstreams in the frequency domain**

**Author(s):** Sostawa, B.<sup>1</sup>; Speidel, J.<sup>1</sup>

**Affiliation(s):**

<sup>1</sup> Inst. fur Nachrichtenubertragung, Stuttgart Univ., Germany

**Journal:** ITG-Fachbericht, no.156, pp.197-202

**Publisher:** VDE-Verlag

**Country of Publication:** Germany

**Publication Date:** 1999

**Conference Title:** Multimedia, Anwendungen, Technologie, Systeme (Multimedia, application, technology, system)

**Conference Date:** 27-29 Sept. 1999

**Conference Location:** Dortmund, Germany

**Language:** English

**Document Type:** Conference Paper in Journal (PA)

MPEG-2 video coding is widely used in broadcasting and increasingly in studio applications. For reasons of limited storage and/or transmission capacity, it may be necessary to reduce the bit rate of MPEG-2 video bitstreams. We present a frequency domain transcoder (FDTC) with low complexity and low memory requirements which can reduce the bit rate of the incoming video bitstream. A rate control with low delay provides a constant bit rate (CBR) stream at the output, independent of whether the input bit rate is variable (VBR) or constant (CBR). The FDTC achieves the same peak signal-to-noise ratio (PSNR) as a bulky cascade of a complete MPEG-2 video decoder and encoder. Moreover, for real time applications, an implementation of the FDTC on a media processor is presented. ( 5 refs.)

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8/5/18 (Item 5 from file: 2)

DIALOG(R)File 2: INSPEC

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**Session-based resource management for distributed multimedia system**

**Author(s):** Zhang Zhan-Jun<sup>1</sup>; Yang Xue-Liang<sup>1</sup>; Zhang Jing<sup>1</sup>

**Affiliation(s):**

<sup>1</sup> Dept. of Comput. Sci., Univ. of Sci. & Technol. of China, Beijing, China

**Journal:** Chinese Journal of Computers, vol.21, no.11, pp.970-9

**Publisher:** Science Press

**Country of Publication:** China

**Publication Date:** Nov. 1998  
**Language:** Chinese  
**Document Type:** Journal Paper (JP)

The guarantees of steady rate of continuous multimedia streams and synchronization among media streams are important problem in distributed multimedia system (DMS). The model of resource management is a key issue to guarantee them in systems. This paper presents a model of session-based resource allocation and management. When resources are allocated, it can meet the resources required by steady continuous media stream by making equilibrium equation to allocate thread periods, I/O processors periods, buffer space and network bandwidth for continuous media streams. The results show that periods of thread, I/O process and network process are functions about buffer space. When a session requests resources, system will decide whether it can be scheduled according to schedulability of CPU period, buffer space, I/O bandwidth and network bandwidth that are presented in this paper. When resource is **managed**, it can meet synchronization among media **streams** by adjusting their **rates**. On this scheme, the **authors** suggest an approach to real-time generation of session resource requirements, which resource overheads. ( 6 refs.)

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8/5/21 (Item 8 from file: 2)  
DIALOG(R)File 2: INSPEC  
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**Project PATRON-audio and video on demand at the University of Surrey**

**Author(s):** Maslin, J.<sup>1</sup>; Lyon, E.<sup>1</sup>

**Affiliation(s):**

<sup>1</sup> Dept. of Inf. Services, Surrey Univ., Guildford, UK

**Journal:** Information Services & Use , vol.18 , no.1-2 , pp.45-51

**Publisher:** IOS Press

**Country of Publication:** Netherlands

**Publication Date:** 1998

**Language:** English

**Document Type:** Journal Paper (JP)

Project PATRON (Performing Arts Teaching Resources Online) has been designed to deliver digital audio, video, music scores and dance notation across a high speed network to the desktop. Many of the resource materials were in the short loan section and a major aim was to investigate ways of improving access to reserve materials, such as music CDs and dance videos, for staff and students. User requirements were investigated via a series of initial focus groups which informed the design of the PATRON interface. User evaluation has continued to play a major part in the project. Typical scenarios for the ways in which the service is aimed to be used include students individually reading a score and listening to a number of interpretations of the music using standard computers. Because the same pieces can be used simultaneously, this will remove the pressures on library resources. Another scenario sees the material being made available in lecture theatres with a full range of playing **controls**. The **authors** discuss the resource materials (conversion, **scanned** images, **audio**, and **video**), the system components, and the user interface. The project has demonstrated the ability to bring together different types of material through a simple user interface and achieve good levels of quality on standard current computers. ( 0 refs.)

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8/5/25 (Item 12 from file: 2)  
DIALOG(R)File 2: INSPEC  
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**Complexity based rate control for MPEG encoder**

**Author(s):** King-Wai Chow<sup>1</sup>; Bede Liu<sup>1</sup>

**Affiliation(s):**

<sup>1</sup> Dept. of Electr. Eng., Princeton Univ., NJ, USA

**Book Title:** Proceedings ICIP-94 (Cat. No.94CH35708)

**Inclusive Page Numbers:** 263-7 vol.1

**Publisher:** IEEE Comput. Soc. Press, Los Alamitos, CA

**Country of Publication:** USA  
**Publication Date:** 1994  
**Conference Title:** Proceedings of 1st International Conference on Image Processing  
**Conference Date:** 13-16 Nov. 1994  
**Conference Location:** Austin, TX, USA  
**Conference Sponsor:** IEEE Signal Process. Soc  
**Item Identifier (DOI):** [10.1109/ICIP.1994.413316](https://doi.org/10.1109/ICIP.1994.413316)  
**Part:** vol.1  
**Number of Pages:** 3 vol. (liii+ 992+ 1064+ 1050)  
**Language:** English  
**Document Type:** Conference Paper (PA)

Bit rate control is an important step in the video encoding process in that it transforms a variable **rate** bit **stream** into a constant **rate** one for communication channels or storage of **fixed** bandwidth. The **authors** propose a hierarchical approach to this problem based on a novel method to characterize the activity or complexity of the image sequence. They introduce a local discrepancy measure, AME (average of maximum 10% of mean square error) of the macroblock. The method performs better than the others in AME with similar mean square error per pixel. ( 10 refs.)

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8/5/27 (Item 14 from file: 2)  
DIALOG(R)File 2: INSPEC  
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#### **Development of ASIC based H1 rate video codec**

**Author(s):** Kobayashi, T.<sup>1</sup>; Shomura, K.<sup>1</sup>; Saito, R.<sup>1</sup>; Fujiwara, H.<sup>1</sup>; Shiina, T.; Ogata, N.; Hamanaka, S.

**Affiliation(s):**

<sup>1</sup> GC Technol. Co., Tokyo, Japan

**Journal:** Journal of the Institute of Television Engineers of Japan , vol.47 , no.10 , pp.1313-22

**Country of Publication:** Japan

**Publication Date:** Oct. 1993

**Language:** Japanese

**Document Type:** Journal Paper (JP)

From viewpoints of performance, cost, and flexibility, programmable ASICs are the best **choice** for implementing H1 **rate video** codecs. For compact implementation, the **authors** developed their own ASIC for the audio codec, adopted a high performance H.221 multiplexer-demultiplexer and organized the codec system and picture quality controls under a single microprocessor. They implemented various kinds of communication interfaces, and confirmed performance and functions by evaluating image quality and testing conformance with different vendors codecs. ( 21 refs.)

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8/5/32 (Item 19 from file: 2)  
DIALOG(R)File 2: INSPEC  
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#### **Management of an adaptable-bit-rate video service in a MAN environment**

**Author(s):** Marini, M.<sup>1</sup>; Albanese, A.

**Affiliation(s):**

<sup>1</sup> Telettra, Milano, Italy

**Journal:** Proceedings of the SPIE - The International Society for Optical Engineering , vol.1364 , pp.289-94

**Country of Publication:** USA

**Publication Date:** 1991

**Conference Title:** FDDI, Campus-Wide and Metropolitan Area Networks

**Conference Date:** 19-21 Sept. 1990

**Conference Location:** San Jose, CA, USA

**Conference Sponsor:** SPIE

**Language:** English

**Document Type:** Conference Paper in Journal (PA)

The **authors** describe an adaptable-bit-rate **video** service concept experiment and its **management** in an experimental prototype of a public metropolitan area network (MAN). In the experiment, the 'service providers' supply their customers with a set of service management primitives to implement customer-defined management applications and provide users with a high level of flexibility in the service definition. The paper describes the architecture for an experimental service management system that includes customer controlled features for dynamic bandwidth allocation, group addressing, and address screening. ( 6 refs.)

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8/5/57 (Item 1 from file: 99)  
DIALOG(R)File 99: Wilson Appl. Sci & Tech Abs  
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**Joint rate control for VBR MPEG video on PVC ATM links**

Reininger, Daniel ; Kwok, Wilson

Multimedia Systems v. 5 (December 1997) p. 380-5

**Language:** English **Record Status:** Corrected or revised record

The **authors** present a joint rate **control** algorithm for variable bit rate (VBR) **MPEG**-compressed digital video on point-to-point permanent virtual circuit asynchronous transfer mode links. The algorithm controls the encoding mode of a number of video encoders operating on variable bit rate or constant bit rate (CBR) mode. It selects the encoding mode based on the buffer occupancy of a multiplexer colocated with the encoders that interfaces them to the permanent virtual link. During congestion-free periods, VBR encoding is predominantly used, whereas during congested periods, CBR mode is used. An evaluation of the algorithm's performance through simulation of a packet multiplexer showed that the algorithm improved performance over multiplexed conventional CBR or open-loop VBR MPEG video without substantially increasing implementation complexity.

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8/5/58 (Item 2 from file: 99)  
DIALOG(R)File 99: Wilson Appl. Sci & Tech Abs  
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**Efficient Real-Time Frame Layer Rate Control Technique for Low Bit Rate Video over WLAN**

Kim, Yoon ; Pyun, Jae-Young; Kim, Hye-Soo

IEEE Transactions on Consumer Electronics v. 49 no3 (Aug. 2003) p. 621-8

**Document Type:** Feature Article **Language:** English **Record Status:** Corrected or revised record

The **authors** propose a real-time frame-layer-rate **control** algorithm for low-bit-rate **video** coding over IEEE 802.11 wireless local area network. The proposed method performs bit allocation at the frame level to minimize variations in distortion between frames and the average distortion over an entire sequence. The proposed method is shown to offer better visual and PSNR performance than the existing TMN8 rate control method.

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8/5/60 (Item 4 from file: 99)  
DIALOG(R)File 99: Wilson Appl. Sci & Tech Abs  
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**Rate Control of MPEG Video for Consistent Picture Quality**

Hong, Sung-Hoon ; Yoo, Sang-Jo; Lee, Si-Woong

IEEE Transactions on Broadcasting v. 49 no1 (Mar. 2003) p. 1-13

**Document Type:** Feature Article **Language:** English **Record Status:** Corrected or revised record

The **authors** propose an **MPEG video rate control** scheme for consistent picture quality. The scheme is based on a rate-distortion (RD) estimation model for predicting bits and distortion generated from an encoded frame at a given quantization parameter. It is a low complexity method for computing RD data and achieves estimation errors for rate and distortion of less than 2.5 and 1.5

percent, respectively.

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8/5/65 (Item 9 from file: 99)  
DIALOG(R)File 99: Wilson Appl. Sci & Tech Abs  
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**Rate control for VBR video over ATM: simplification and implementation**

Yang, Yan ; Hemami, Sheila S

IEEE Transactions on Circuits and Systems for Video Technology v. 11 no9 (Sept. 2001) p. 1045-58

**Document Type:** Feature Article **Language:** English **Record Status:** Corrected or revised record

The **authors** show that the **selection** of **video** source and channel **rates** can be separated, simplifying the **rate- control** problem for **video** transmission over asynchronous transfer mode (ATM) networks. Source and channel rates selection was always performed jointly because the rates are related through buffer and network constraints and therefore appear to be interdependent. A new rate-control algorithm implements noniterative, separate sequential selection of source and channel rates to minimize the distortion variation between frames, subject to all buffer and network constraints.

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8/5/67 (Item 11 from file: 99)  
DIALOG(R)File 99: Wilson Appl. Sci & Tech Abs  
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**A practical rate control algorithm for VBR MPEG-2 video transmission over ATM networks**

Lee, Won-Yeol ; Jeong, Yeonsik; Lee, Jae Cheol

IEEE Transactions on Consumer Electronics v. 46 no2 (May 2000) p. 257-64

**Document Type:** Feature Article **Language:** English **Record Status:** Corrected or revised record

The **authors** propose a joint encoder and channel rate **control** system for real-time, variable-bit-rate **video** transmission over asynchronous transfer mode networks. In this a system, the channel rate over unit group of pictures is allocated by the proposed 3-state Markov chain model, and encoder rate control is carried out by solving the minimum distortion equation using the Lagrange multiplier. Tests show that this method maintains consistent quality and compares well with conventional real-time implementations.

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8/5/72 (Item 2 from file: 95)  
DIALOG(R)File 95: TEME-Technology & Management  
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**XTPX transport system for flexible QoS support of multimedia applications**

Miloucheva, I; Bonnesz, O

TU of Berlin, D

1995 IEEE 14th Annual Internat. Phoenix Conf. on Comput. and Communications, Conf. Proc., Scottsdale, USA, Mar 28-31, 1995 , 1995

**Document type:** Conference paper **Language:** English

**Record type:** Abstract

This paper describes design, implementation aspects and usage of a transport system based on XTPX (eXpress Transfer Protocol eXtended) for flexible Quality of Service (QoS) support of multimedia applications in a heterogeneous network, operating system and workstation environment. The **authors** focus especially on protocol mechanisms providing specific **multimedia** requirements: (1) **Rate control** techniques for synchronization and bundling of multimedia connections as well as for multimedia traffic 'squeezing' to control the discrete time independent (asynchronous) media used simultaneously with continuous time dependent (isochronous) media. (2) Throughput scalability support based on dynamic rate control and threshold QoS monitoring using the XTPX Management Information Base. (3) Adaptive acknowledgment and retransmission techniques considering QoS requirements (throughput, delay, delay jitter) of specific media data and different network conditions

(ATM, LAN, satellite). The usage of these mechanisms is demonstrated with scenarios and performance measurements in PC environment on top of Ethernet network.

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8/5/77 (Item 4 from file: 60)

DIALOG(R)File 60: ANTE: Abstracts in New Tech & Engineer

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**Packet identification mechanism at the transmitter and receiver for an enhanced ATSC 8-VSB system**

Gaddam, Vasanth R; Birru, Dagnachew

**Document Type:** Patent    **Record Type:** Abstract

**Language:** English

A flexible digital transmission system that improves upon the ATSC A/53 HDTV signal transmission standard. The system includes a digital signal transmitter for generating a first Advanced Television Systems Committee (ATSC) standard encoded 8-VSB bit stream and, for generating an encoded new robust bit stream for transmitting high priority information bits, wherein symbols of the new bit stream are capable of being transmitted according to a transmission mode including: a 2-VSB mode and a 4-VSB transmission mode. The standard 8-VSB bit stream and new bit stream may be simultaneously transmitted over a terrestrial channel according to a **broadcaster** defined bit-rate ratio. The transmission system includes a **control** mechanism for generating information needed for encoding robust packets at a transmitter device. It also includes a mechanism for encoding control parameters and multiplexes the generated information with the standard and robust bit-streams for transmission. A receiver architecture is additionally provided to decode standard and robust bit-streams transmitted by the transmitter device.

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16/5/1 (Item 1 from file: 8)

DIALOG(R)File 8: Ei Compendex(R)

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**Multimedia meets computer graphics in SMIL2.0: A time model for the web**

**Issue Title:** Proceedings of the 11th International Conference on World Wide Web, WWW '02

Schmitz, Patrick

**Corresp. Author/ Affil:** Schmitz, P.: W3C SYMM Working Group, United States

**Corresp. Author email:** cogit@ludicrum.org

**Conference Title:** 11th International Conference on World Wide Web, WWW '02

**Conference Location:** Honolulu, HI United States    **Conference Date:** 20020507-20020511

**Sponsor:** Association for Computing Machinery (ACM); WWW'02

**E.I. Conference No.:** 80482    Proceedings of the 11th International Conference on World Wide Web, WWW '02 ( Proc. Int. Conf. World Wide Web, WWW ) ( United States ) 2002 (45-53)

**Publication Date:** 20021201

**Publisher:** Association for Computing Machinery

**Item Identifier (DOI):** [10.1145/511446.511453](https://doi.org/10.1145/511446.511453)

**Document Type:** Conference Paper; Conference Proceeding    **Record Type:** Abstract

**Language:** English    **Summary Language:** English

**Number of References:** 32

Multimedia scheduling models provide a rich variety of tools for managing the synchronization of media like video and audio, but generally have an inflexible model for time itself. In contrast, modern animation models in the computer graphics community generally lack tools for synchronization and structural time, but allow for a flexible concept of time, including variable pacing, **acceleration** and deceleration and other tools useful for **controlling** and adapting **animation** behaviors. Multimedia **authors** have been forced to choose one set of features over the others, limiting the range of presentations they can create. Some programming models addressed some of these problems, but provided no declarative means for authors and authoring tools to leverage the functionality. This paper describes a new model incorporated into SMIL 2.0 that combines the strengths of scheduling models with the flexible time manipulations of animation models. The implications of this integration are discussed with respect to scheduling and structured time, drawing upon experience with SMIL 2.0

timing and synchronization, and the integration with XHTML.

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16/5/3 (Item 3 from file: 8)

DIALOG(R)File 8: Ei Compendex(R)

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**Power-spectrum-based neural-net connection admission control for multimedia networks**

Chang, C.-J.; Lin, L.-F.; Lin, S.-Y.; Cheng, R.-G.

**Corresp. Author/ Affil:** Chang, C.-J.: Dept. of Communication Engineering, National Chiao Tung University, Hsinchu 300, Taiwan, Province of China

IEE Proceedings: Communications ( IEE Proc Commun ) ( United Kingdom ) 2002 149/2 (70-76)

**Publication Date:** 20020722

**Publisher:** Institution of Engineering and Technology

**Item Identifier (DOI):** [10.1049/ip-com:20020031](https://doi.org/10.1049/ip-com:20020031)

**Document Type:** Article; Journal **Record Type:** Abstract

**Language:** English **Summary Language:** English

**Number of References:** 13

Multimedia networks need sophisticated and real-time connection admission control (CAC) not only to guarantee the required quality of service (QoS) for existing calls but also to enhance utilisation of systems. The power spectral density (PSD) of the input process contains correlation and burstiness characteristics of input traffic and possesses the additive property. Neural networks have been widely employed to deal with the traffic control problems in high-speed networks because of their self-learning capability. The **authors** propose a power-spectrum-based neural-net connection admission control (PNCAC) for **multimedia** networks. A decision hyperplane is constructed for the CAC using power spectrum parameters of traffic sources of connections, under the constraint of the QoS requirement. Simulation results show that the PNCAC method provides system utilisation and robustness superior to the conventional equivalent capacity CAC scheme and Hiramatsu's neural network CAC scheme, while meeting the QoS requirement.

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16/5/8 (Item 8 from file: 8)

DIALOG(R)File 8: Ei Compendex(R)

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**QuickTime: An extensible standard for digital multimedia**

Hoffert, Eric; Krueger, Mark; Mighdoll, Lee; Mills, Micheal; Cohen, Johnathan; Camplejohn, Doug; Leak, Bruce; Batson, Jim; Van Brink, David; Blackketter, Dean; Arent, Michael; Williams, Rich; Thorman, Chris; Yawitz, Mitch; Doyle, Ken; Callahan, Sean

**Corresp. Author/ Affil:** Hoffert, Eric

**Conference Title:** 37th Annual IEEE International Computer Conference - COMPCON SPRING '92

**Conference Location:** San Francisco, CA, USA **Conference Date:** 19920224-19920228

**Sponsor:** IEEE Computer Soc

**E.I. Conference No.:** 17597 Digest of Papers - IEEE Computer Society International Conference ( Dig Pap IEEE Comput Soc Int Conf ) 1992 , IEEE 92CH3098-1 (15-20)

**Publication Date:** 19921201

**Publisher:** Publ by IEEE

**Document Type:** Conference Paper; Conference Proceeding **Record Type:** Abstract

**Language:** English **Summary Language:** English

**Number of References:** 8

The **authors** describe **QuickTime**, an extensible standard for digital **multimedia** which **establishes** a foundation for the representation of time-based objects and file formats, still image and video compression techniques, human interface conventions, and application programming interfaces. All of these representations can stay the same as one moves towards an era of full-screen, full-motion digital video/high-resolution digital systems and as the underlying media technologies and compression schemes improve rapidly over time. QuickTime includes direct support in the operating system for audio/video synchronization and for still and moving image compression algorithms. Software-based video decompression is used as a means to permit dynamic media functionality in all

color Macintosh computers. As a result, QuickTime brings dynamic media to a broad range of applications, including not only media authoring tools such as video editors and animation systems, but to mainstream tools such as word processors, databases, spreadsheets, and electronic mail.

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16/5/24 (Item 1 from file: 2)  
DIALOG(R)File 2: INSPEC  
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**IVFCP: a flow control protocol for Internet video**

**Author(s):** Qi Han<sup>1</sup>; Hongchi Shi<sup>1</sup>

**Affiliation(s):**

<sup>1</sup> Dept. of Comput. Eng. & Comput. Sci., Missouri Univ., Columbia, MO, USA

**Journal:** Proceedings of the SPIE - The International Society for Optical Engineering , vol.4118 , pp.136-45

**Publisher:** SPIE-Int. Soc. Opt. Eng.

**Country of Publication:** USA

**Publication Date:** 2000

**Conference Title:** Parallel and Distributed Methods for Image Processing IV

**Conference Date:** 30 July 2000

**Conference Location:** San Diego, CA, USA

**Conference Sponsor:** SPIE

**Item Identifier (DOI):** [10.1117/12.403597](https://doi.org/10.1117/12.403597)

**Language:** English

**Document Type:** Conference Paper in Journal (PA)

This paper attempts to provide better services on the Internet based on enhancing the application layer. This **authors** propose a new Internet **video** flow **control** protocol (IVFCP) which adjusts data sending **rate** based on the combination of the receiver buffer length, packet loss ration, and current data rate. The flow control protocol runs every round trip instead of periodically or when congestion happens. It can control the rate more directly and precisely. This rate-based feedback control protocol is evaluated through simulation, and its performance is compared with that of other protocols. ( 16 refs.)

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16/5/26 (Item 3 from file: 2)  
DIALOG(R)File 2: INSPEC  
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**MMX technology code optimization**

**Author(s):** Fomitchev, M.I.

**Journal:** Dr. Dobb's Journal , vol.24 , no.9 , pp.38-48

**Publisher:** Miller Freeman

**Country of Publication:** USA

**Publication Date:** Sept. 1999

**Language:** English

**Document Type:** Journal Paper (JP)

It has not been that long since computationally intensive, real-time graphics applications required digital signal processors (DSPs) or other special processors. With the introduction of single instruction stream multiplex data stream (SIMD) extensions to general-purpose processors, however, things have changed. The **author** discusses Intel's MMX **multimedia** instruction **set** extension. He discusses MMX code optimization and suggests techniques for achieving maximum **speed** on two common PC CPUs: the Intel Pentium II and AMD K6-2. ( 0 refs.)

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16/5/28 (Item 5 from file: 2)  
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**Architecture of the virtual broadcast studio****Author(s):** Guzik, K.<sup>1</sup>**Affiliation(s):**<sup>1</sup> Sun Microsystems, Inc., Menlo Park, CA, USA**Journal:** SMPTE Journal, vol.106, no.12, pp.881-6**Publisher:** Soc. Motion Picture & Telev. Eng.**Country of Publication:** USA**Publication Date:** Dec. 1997**Language:** English**Document Type:** Journal Paper (JP)

The fusion of digital video technology, high-speed wide-area networks, and digital file servers allows us to view the future of television broadcast studios very differently than we do today. As computer and network technologies have advanced in both sophistication and performance, our understanding of the possibilities that the application of these technologies can provide has also grown. Digital networks are no longer used simply as a mechanism for communication between computers, but are capable of transferring data fast enough to make the real-time distribution of high-quality video data to a wide audience a reality. The ability to store, access, control and move large volumes of digital data reliably across great distances at very high **speed** gives us the tools with which we can build the types of services necessary to **manage** and run a **broadcast studio**. In addition, through the use of network distributed object software models, we can build studios that are very flexible and easy to change, and highly adaptable to new technologies with a minimum of effort or disruption. ( 3 refs.)

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16/5/33 (Item 10 from file: 2)

DIALOG(R)File 2: INSPEC

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**A new rate control strategy for the MPEG video coding algorithm****Author(s):** Kawashima, M.<sup>1</sup>; Cheng-Tie Chen<sup>1</sup>; Fure-Ching Jeng<sup>1</sup>; Singhal, S.<sup>1</sup>**Affiliation(s):**<sup>1</sup> Bell Comm. Res., Morristown, NJ, USA**Journal:** Journal of Visual Communication and Image Representation, vol.4, no.3, pp.254-62**Country of Publication:** USA**Publication Date:** Sept. 1993**Language:** English**Document Type:** Journal Paper (JP)

The **authors** describe a new **rate control** strategy for the **MPEG** video coding algorithm. The presented strategy assigns quantizer step sizes considering the spatial activity of the coded area, and changes the bit allocation to each coding mode dynamically so that the ratio of quantizer step sizes among different coding modes becomes stable at the given target ratio. The strategy was implemented on the Hybrid Extended MPEG (Bellcore's proposal to ISO/MPEG) in simulations. In the simulations, it was shown that the resulting ratio of quantizer step sizes among different coding modes is always close to the given target ratio while the coder also satisfies the constraint of the given bit rate. ( 6 refs.)

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16/5/50 (Item 27 from file: 2)

DIALOG(R)File 2: INSPEC

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**Technical programme equipment for television of the Norwegian state broadcasting authority****Author(s):** Mathisen, N.**Journal:** Teknisk Ukeblad, vol.107, no.42, pp.937-942**Country of Publication:** Norway**Publication Date:** 17 Nov. 1960**Language:** Norwegian**Document Type:** Journal Paper (JP)

The ground area of the premises is 1000 m SUP 2 , comprising two studios of 240 m SUP 2 and 110 m SUP 2 , between which is situated the control section. A general account is given of the motion picture equipment, methods of synchronization, sound recording and film **scanners**. The studio installation described included: camera chains, sound and **studio**-lighting equipment, the master **control** room, **video** tape recorders and outside broadcasting equipment.

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9/3,K/1 (Item 1 from file: 275)  
DIALOG(R)File 275: Gale Group Computer DB(TM)  
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**Will MPEG-4 Fly? A new streaming-media standard promises to unify a fractious market, but inferior quality and bureaucracy may block acceptance.(Technology Information)**

Ozer, Jan  
PC Magazine , 101  
April 3 , 2001  
**Language:** English      **Record Type:** Fulltext; Abstract  
**Word Count:** 2597      **Line Count:** 00213

their audiences having the necessary playback capabilities.

Apple, Microsoft, and Real have well-established pricing policies for their technologies, with free decoders for all. Until **MPEG-4** royalties and **rates** are similarly **established**, **publishers** evaluating **MPEG-4** as

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9/3,K/5 (Item 5 from file: 275)  
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**QuickTime. (enhancements in version 2.5 of Apple system extension) (includes related articles on QuickTime on the Web, Microsoft ActiveMovie, future enhancements) (Product Information)**

Gore, Andrew; Milstead, Jeffy  
MacUser , v12 , n9 , p63(4)  
Sep , 1996  
**Language:** English      **Record Type:** Fulltext; Abstract  
**Word Count:** 2985      **Line Count:** 00239

version boasts unique features that make it the definitive plug-in for QuickTime on the Net.

Apple's QuickTime plug-in lets Web authors embed **QuickTime movies** in their pages. A **set** of HTML tags lets **authors** specify whether **movies** will play automatically upon loading and whether they will loop continuously or play only once. Movie viewers can play, pause, and fast-forward movies. And...

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9/3,K/7 (Item 7 from file: 275)  
DIALOG(R)File 275: Gale Group Computer DB(TM)  
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**Passport Producer Pro: Passport Designs' multimedia presentation tool goes interactive. (Software Review) (New on the Menu: Reviews) (Evaluation)**

Bledny, David  
MacUser , v10 , n5 , p48(2)  
May , 1994  
**Document Type:** Evaluation  
**Language:** ENGLISH      **Record Type:** FULLTEXT; ABSTRACT  
**Word Count:** 1064      **Line Count:** 00088

control cues. The video-window cues support a variety of video digitizers and enable you to play live

video directly to the screen. The machine-**control cues control video** decks and laserdisc players connected to the **video** digitizers. **Producer** Pro supports protocols for Sony VISCA, MIDI

Machine Control, Pioneer Laserdisc, and V-LAN and ARTI networks. Also worth mentioning is the CD Disc cue...

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9/3,K/11 (Item 11 from file: 275)

DIALOG(R)File 275: Gale Group Computer DB(TM)

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**QuickTime-savvy action takes over Director's chair. (Macromedia Inc.'s MacroMind Director 3.1 animation package, Apple QuickTime operating system enhancement)(includes related article on product rating) (Software Review) (Evaluation)**

Wagstaff, Sean

MacWEEK , v6 , n29 , p57(1)

August 10 , 1992

**Document Type:** Evaluation

**Language:** ENGLISH **Record Type:** FULLTEXT; ABSTRACT

**Word Count:** 1339 **Line Count:** 00107

this simple change to QuickTime movies, you'll need Premiere or VideoShop, which break QuickTime sounds and images into separate, editable tracks. You can, however, **control** a **QuickTime movie's** **playout** volume via Lingo scripting, and you can turn **Director's sound** off if you're happy with silence or an external sound source.

Play time. Director plays every frame in an animation, so on slower machines...

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9/3,K/18 (Item 7 from file: 621)

DIALOG(R)File 621: Gale Group New Prod.Annou.(R)

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**Vivo Software Announces New Version of VivoActive Producer**

PR Newswire , p 1112NETU020

Nov 12 , 1996

**Language:** English **Record Type:** Fulltext

**Document Type:** Newswire ; Trade

**Word Count:** 861

is transported like any other common Web data type, enabling video to pass securely through firewalls and wherever standard Web traffic goes

-- It works with **established**, popular Web **video** formats, such as **QuickTime**/AVI files, making VivoActive software complementary to existing **video** resources

The VivoActive **Producer** 1.5 is available in special demo version for Power Macintosh free of charge directly from Vivo's Web site at <http://www.vivo.com...>

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9/3,K/25 (Item 1 from file: 16)

DIALOG(R)File 16: Gale Group PROMT(R)

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**Tales from the real world.(media asset management systems)**

Dean, Richard

Broadcast , p 10B(1)

March 9 , 2001

**Language:** English **Record Type:** Abstract

**Document Type:** Magazine/Journal ; Trade

Media asset **management** systems at television **broadcasting** companies provide the **speed** needed at news and post-production **studios** to access video **clips**, yet one problem that exists with such systems is knowing which data to store and which to dispose.

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9/3,K/34 (Item 3 from file: 148)

DIALOG(R)File 148: Gale Group Trade & Industry DB

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**Multimedia VARs make the video connection. (includes related case studies on Media Lab and Source Digital Systems) (Industry Trend or Event)**

Jordan, Peter

VARbusiness , v11 , n17 , p36C(4)

Nov 1 , 1995

**Language:** English **Record Type:** Fulltext; Abstract

**Word Count:** 1706 **Line Count:** 00142

the technology matures to play back full-motion, full-screen video, increasingly multimedia means digital video.

The Video Connection

"True multimedia is full-motion, interactive **video** with 30 **frames** per **second** and clear **video reproduction**," says Ken Thorson, **manager** of the channel **management** group at J3 Learning Corp., a **multimedia** training **publisher** in Milwaukee.

"It used to be that because digital video had so many problems, people were sticking with graphics or animation instead of digital video..."

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9/3,K/43 (Item 1 from file: 647)

DIALOG(R)File 647: UBM Computer Fulltext

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**NHL Video Clips, For A Price**

Tony Kontzer

INFORMATIONWEEK , 2002 , n 919 , PG12

**Publication Date:** 021216

**Journal Code:** IWK **Language:** English

**Record Type:** Fulltext

**Section Heading:** Front End

**Word Count:** 94

The service uses streaming technology from **Speedera**, **video** servers from CinemaNow, and digital-rights **management** software from Microsoft. Says Ryan Hughes, the NHL's **director** of new **media** business development, "We fully expect to make money."

<http://informationweek.com/>

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